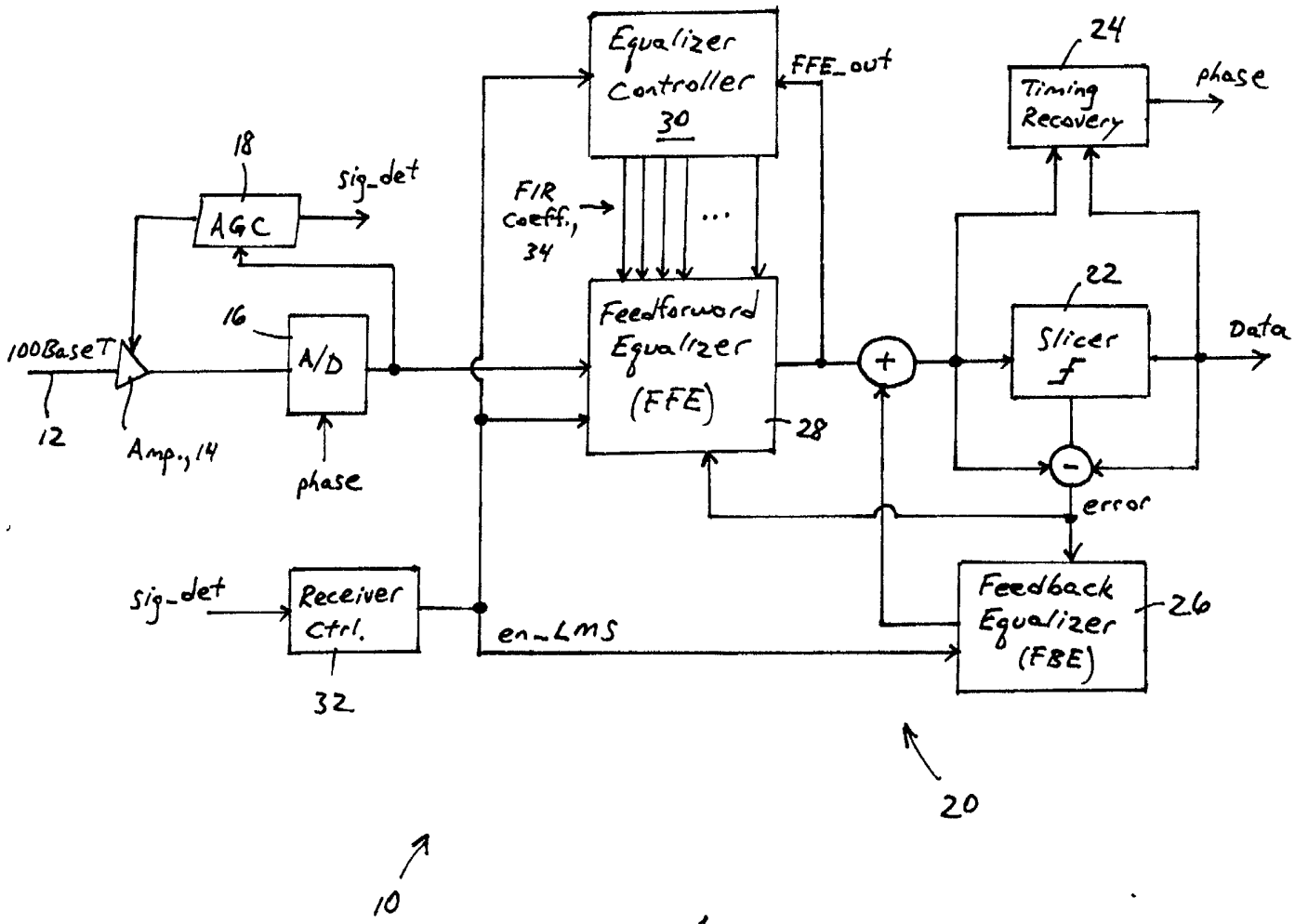
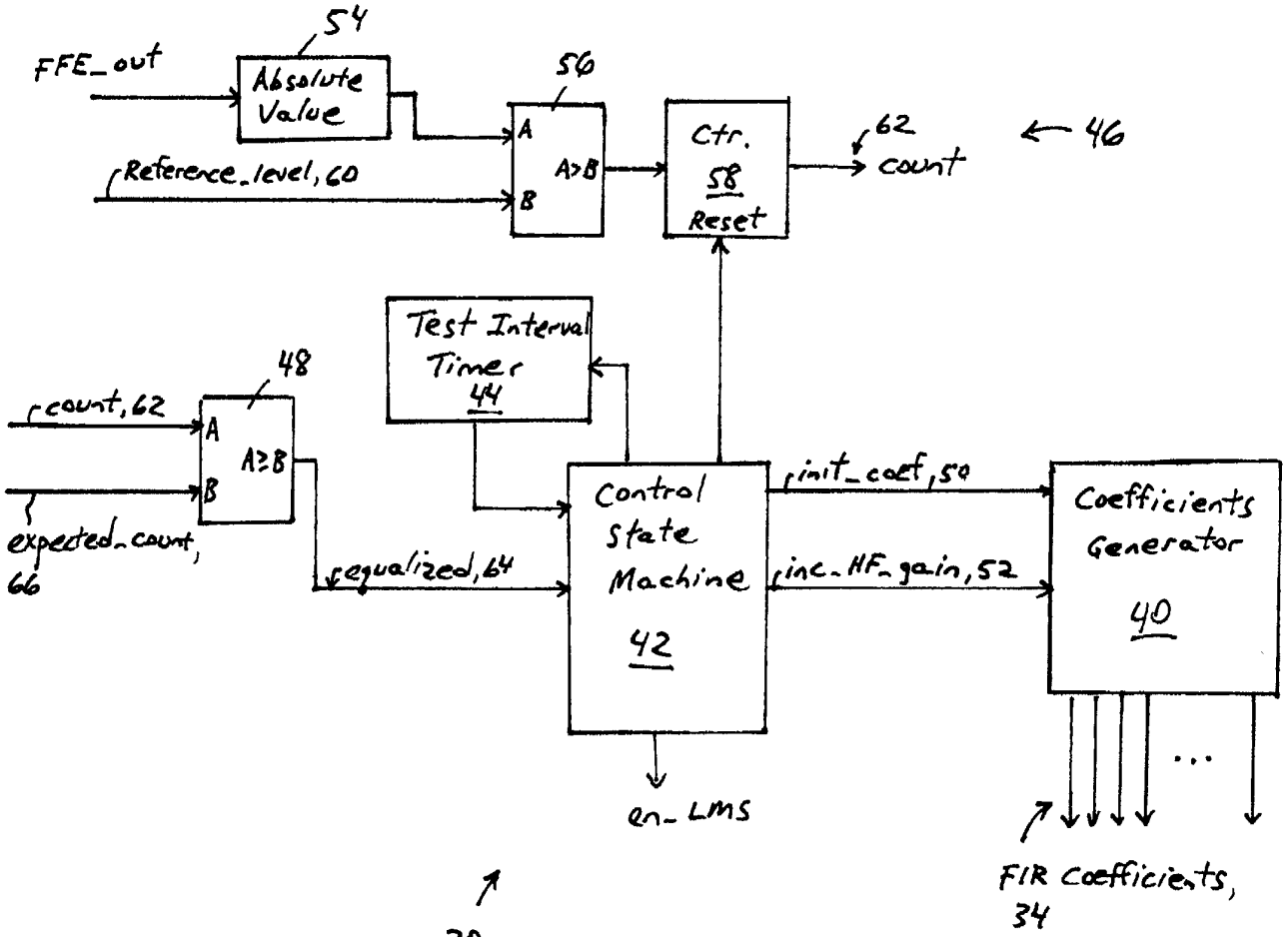

Equalizer Controller 30
FFE_out
24
Timing Recovery
phase
18
AGC
sig_det
FIR Coeff., 34
...
22
Slicer
Data
16
A/D
100BaseT
12
Amp., 14
phase
Feedforward Equalizer (FFE)
28
+
-
error
sig_det
Receiver Ctrl.
32
en_LMS
Feedback Equalizer (FBE)
26
20
10

Figure 1


54
FFE_out
Absolute Value
56
A
A>B
B
Reference_level, 60
Ctr.
58
Reset
62
count
46
Test Interval Timer
44
48
count, 62
A
A≥B
B
expected_count, 66
equalized, 64
Control State Machine
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inc_HF_gain, 52
Coefficients Generator
40
en_LMS
FIR coefficients, 34
30

Figure 2

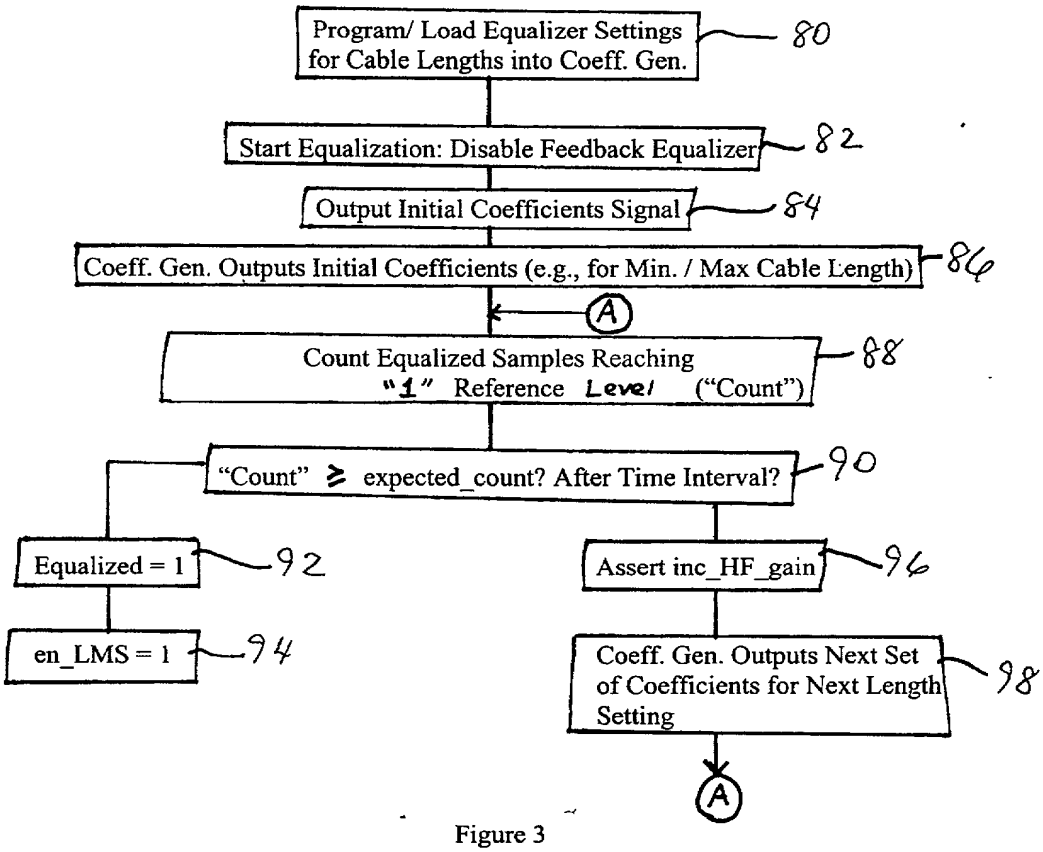
Program/ Load Equalizer Settings for Cable Lengths into Coeff. Gen.
80
Start Equalization: Disable Feedback Equalizer
82
Output Initial Coefficients Signal
84
Coeff. Gen. Outputs Initial Coefficients (e.g., for Min. / Max Cable Length)
86
A
Count Equalized Samples Reaching "1" Reference Level ("Count")
88
"Count" ≥ expected_count? After Time Interval?
90
Equalized = 1
92
en_LMS = 1
94
Assert inc_HF_gain
96
Coeff. Gen. Outputs Next Set of Coefficients for Next Length Setting
98
A

Figure 3